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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,253	03/08/2001	Raymond K.J. Ong	GECAN-3214	5453

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EXAMINER	
WAKS, JOSEPH	
ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 05/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/681,253	ONG ET AL.	
	Examiner	Art Unit	
	Joseph Waks	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 March 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-10,12-16 and 18-26* is/are rejected.

7)☒ Claim(s) *6,11,17 and 27* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

New Office Action

This Office Action is in response to the Application filed on March 8, 2001. The Office Action mailed on April 9, 2002, containing erroneous applicants name and application number, is withdrawn.

The new Office Action in response to the application follows.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 7-9, 12-15, 18-24** are rejected under 35 U.S.C. 102(b) as being anticipated by **Chari et al. (US 4,278,905)**.

Chari et al. disclose a back iron 32 and a plurality of non-magnetic teeth 51installed in the back iron.

Re claims 7-9, the method of attaching the teeth to the back iron and installing the back iron in the machine is inherent to the disclosed structure.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1-3,** and **5** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chari et al. (US 4,278,905)** in view of **Lloyd et al. (US 5,177,054)**.

Chari et al. disclose a back iron 32 and a plurality of non-magnetic teeth 51 having a back section 55 with a key installed in the slots 57 of the back iron of a superconducting electrical machine. However, **Chari et al.** do not teach the machine being a high temperature, superconducting machine.

Lloyd et al. disclose the use for the high temperature, superconducting materials in electrical machines for the purpose of reducing the size and the weight of the motor for the specific power rating.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the machine as taught by **Chari et al.** and to provide well known in the art high temperature superconducting material as taught by **Lloyd et al.** for the purpose of reducing the size and the weight of the motor for the specific power rating by using materials working at significantly higher temperatures than the liquid state temperature of helium.

The method of attaching the teeth to the back iron and installing the back iron in the machine is inherent to the disclosed structure.

5. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Chari et al. (US 4,278,905)** in view of **Lloyd et al. (US 5,177,054)** as applied to claim 3 above and further in view of **Everton (US 5,670,838)**.

The combined machine discloses all elements essentially as claimed. However, it does not disclose the teeth being attached to the back iron with adhesive.

Everton discloses a superconducting electrical machine having teeth 9 bounded to the back iron 10 with an adhesive for the purpose of providing a magnetic reluctance.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined machine and to provide the teeth being attached to the back iron with adhesive as taught by **Everton** for the purpose of providing a magnetic reluctance.

6. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Chari et al. (US 4,278,905)** in view of **Lloyd et al. (US 5,177,054)** as applied to claim 3 above and further in view of **Roger (US 4,375,043)**.

The combined machine discloses all elements essentially as claimed. However, it does not disclose the teeth comprising at least one a glass laminate, a carbon fiber, and a fiber polymer.

Roger discloses an electrical machine having teeth 14 bounded to the back iron 2 with key and made of a glass laminate for the purpose of providing a desired strength and rigidity to the non-magnetic tooth structure.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined machine and to provide the teeth comprising at least one a glass laminate as taught by **Roger** for the purpose of providing a desired strength and rigidity to the non magnetic tooth structure.

7. **Claims 10, 16,** and **26** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chari et al. (US 4,278,905)** in view of **Roger (US 4,375,043)**.

Chari et al. discloses all elements essentially as claimed. However, it does not disclose the teeth comprising at least one a glass laminate, a carbon fiber, and a fiber polymer.

Roger discloses an electrical machine having teeth 14 bounded to the back iron 2 with key and made of a glass laminate for the purpose of providing a desired strength and rigidity to the non-magnetic tooth structure.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the machine as taught by **Chari et al.** and to provide the teeth comprising at least one a glass laminate as taught by **Roger** for the purpose of providing a desired strength and rigidity to the non-magnetic tooth structure.

8. **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Chari et al. (US 4,278,905)** in view of **Everton (US 5,670,838)**.

Chari et al. disclose all elements essentially as claimed. However, **Chari et al.** does not disclose the teeth being attached to the back iron with adhesive.

Everton discloses a superconducting electrical machine having teeth 9 bounded to the back iron 10 with an adhesive for the purpose of providing a magnetic reluctance.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the machine as taught by **Chari et al.** and to provide the teeth being attached to the back iron with adhesive as taught by **Everton** for the purpose of providing a magnetic reluctance.

Allowable Subject Matter

9. **Claims 6, 11, 17,** and **27** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The feature of the non-magnetic tooth including at least one embedded conductor, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Prior Art

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (703) 308-1676. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

JOSEPH WAKS
PRIMARY PATENT EXAMINER
TC-2800

JW
May 2, 2002